

REMARKS

By this Amendment the specification has been amended to better conform with U.S. practice, claim 1 has been amended to include the feature of claim 2 (now canceled), claims 3-5 have been amended to better define the intended subject matter, claims 6 and 7 have been canceled, and new claim 8 has been added to retain subject matter deleted from claim 3. Entry is requested.

A supplemental page 9 for the application containing an abstract of the disclosure is submitted herewith.

In the outstanding Office Action the examiner has rejected claims 1 and 3-5 under 35 U.S.C. 103(a) as being unpatentable over Heller in view of O'Neill and he has rejected claim 2 under 35 U.S.C. 103(a) as being unpatentable over Heller in view of O'Neill and Dante.

It is asserted that this rejection is incorrect.

Heller discloses a portable, hand-held tympanometer with pump and discusses the usual function of this devise. The pump is an ordinary pump with an electromotor engine driving a piston-cylinder pair to produce pressures which are either above or below atmospheric pressure. There are no disclosures which would suggest to a person of ordinary skill in this art to use a piezoelectric pump in this instrument.

O'Neill discloses a piezoelectric pump as such, but fails to disclose the use of piezoelectrically driven valve element in connection therewith. Thus, the disclosure of O'Neill would not, if combined with the teachings

of Heller, suggest the present invention. In order for a pump to function in a tympanometer as disclosed in Heller, it is necessary that the pump can deliver both pressures above and below atmospheric pressure, and further the pump needs to be rather noise free. The pump in O'Neill does not have any of these qualities. Thus, even if an attempt were made to combine the pump of O'Neill with the device of Heller, this would not lead to an operational tympanometer and also it would not lead to the invention according to claim 1, as no piezoelectrically driven valve elements are disclosed in either of these prior art documents.

Dante discloses the use of piezoelectrically driven valve elements. However, the advantages of using such valve elements in connection with a piezoelectrically driven pump for use in a tympanometer is not disclosed or suggested. For the person of ordinary skill who would like to solve the problem associated with prior art tympanometers, which have unreliable, bulky and noisy pumps, there are no traces or hints in any of the cited prior art documents which might point in the direction of the claimed invention. It should be noticed in this connection that piezoelectric pumps as such are usually noisy, but it has been realized by the inventors that this problem may be solved by driving the pumps at frequencies above the audio frequencies of the human hearing, and this may be facilitated by the use of piezoelectric valves, which may be designed with closing and opening times which allow driving frequencies above this range. There is no suggestion in the prior art which could lead the person of

ordinary skill in the direction of this understanding. Even if the prior art comprise the various elements of the invention, there is no teaching which could provide the person of ordinary skill with the understanding which is needed to solve the particular problems relating to tympanometers.

The examiner's prior art rejections should be withdrawn and the presented claims allowed.

Respectfully submitted,

By:

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